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FEE TRANSMITTAL

For FY 2007

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500.00

Complete if Known

Application Number 09/869,389

Filing Date June 28, 2001

First Named Inventor Caude Chapel

Examiner Name Helen Shibru

Art Unit 2621

Attorney Docket No. PF980093

METHOD OF PAYMENT (check all that apply)

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☒ Deposit Account Deposit Account Number: 07-0832 Deposit Account Name: Thomson Licensing, LLC

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description

Each claim over 20 (including Reissues)

Fee (\$)

Small Entity Fee (\$)

50 25

Each independent claim over 3 (including Reissues)

200 100

Multiple dependent claims

360 180

Total Claims

Extra Claims

Fee (\$)

Fee Paid (\$)

Multiple Dependent Claims

Fee (\$)

Fee Paid (\$)

- 20 or HP =

x

=

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims

Extra Claims

Fee (\$)

Fee Paid (\$)

- 3 or HP =

x

=

HP = highest number of independent claims paid for, if greater than 3.

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets

Extra Sheets

Number of each additional 50 or fraction thereof

Fee (\$)

Fee Paid (\$)

- 100 =

/ 50 =

(round up to a whole number) x

=

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Fees Paid (\$)

Other (e.g., late filing surcharge): Appeal Brief

\$500.00

SUBMITTED BY

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Date March 12, 2007

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Serial No.:09/869,389

PF980093

Handwritten initials: AF

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

Applicant : Claude Chapel
Serial No. : 09/869,389
Filed : June 28, 2001
For : Process for Storing a Digital Audio and Video Datastream, Storage Device and Receiver for Implementing the Process
Examiner : Helen Shibru
Art Unit : 2621

APPEAL BRIEF

May It Please The Honorable Board:

Appellants appeal the Final Rejection dated September 7, 2006 of Claims 16-33 of the above-identified application. The fee of five hundred dollars (\$500.00) for filing this Brief and any associated extension fee is to be charged to Deposit Account No. 07-0832. Enclosed is a single copy of this Brief.

Please charge any additional fee or credit any overpayment to the above-identified Deposit Account.

03/14/2007 HGUTEMA1 00000023 070832 09869389

01 FC:1402 500.00 DA Appellants do not request an oral hearing.

Certificate of Mailing under 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in a postage paid envelope addressed to: Mail Stop: Appeal Briefs - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date indicated below.

Signature *John H. O.* Date: 3/12/07

I. REAL PARTY IN INTEREST

The real party in interest of Application Serial No. 09/869,389 is the Assignee of record:

Thomson Licensing S.A.
46 quai Alphonse Le Gallo
F-92100 Boulogne Billancourt
France

II. RELATED APPEALS AND INTERFERENCES

There are currently, and have been, no related Appeals or Interferences regarding Application Serial No. 09/869,389.

III. STATUS OF THE CLAIMS

Claims 16-33 are rejected and the rejection of claims 16-33 is appealed.

IV. STATUS OF AMENDMENTS

All amendments were entered and are reflected in the claims included in Appendix

I.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claim 16 provides a digital video reception device (page 2, lines 35-36 and Fig. 1). The device includes means for reception (page 2, lines 37-38 and Fig. 1, reference no. 101, 102, 103) and for demultiplexing (page 1, lines 32-33, page 2, lines 37-38 and Fig. 1, reference no. 113) of a multiplexed digital stream and means for storage (page 3, lines 12-16 and Fig. 2, reference no. 201). The means for storage includes two file systems (page 15, lines 20-23 and Fig. 5) that have different recording block sizes (page 15, line 36 – page 16, line 2).

Dependent claim 19 includes all the features of independent claim 16 along with additional features that the first file system is adapted to sequential access of the recorded data (page 3, lines 15-16 and page 15, lines 29-40), while the second file system is adapted to random access (page 3, lines 11-13 and page 15, lines 26-29) of the data recorded therein.

Dependent claim 21 includes all the features of independent claim 16 along with additional features that the storage means comprises a recordable disk comprising a single boot block (page 15, lines 31-32), a first area (page 1, line 40 – page 2, line 1) reserved for the service data of the first file system (page 15, lines 24-26 and Fig. 5) and for the corresponding data blocks (page 8, lines 12-16), and a second area (page 2, lines 1-4) reserved for the service data of the second file system (page 15, lines 29-30 and Fig. 5) and for the corresponding data blocks (page 8, lines 12-16).

Dependent claim 22 includes all the features of independent claim 16 along with additional features that a first video writing memory is included for accumulating a predetermined quantity of demultiplexed video packets (page 3, lines 1-2 and Fig. 2, reference no. 205a) and a second audio writing memory is included for accumulating demultiplexed audio packets (page 3, lines 3-4 and Fig. 2, reference no. 205b). A storage means (page 2, lines 1-4 and Fig. 2, reference no. 201) is also included. The means of storage is adapted to store the remultiplexed audio and video packets in the form of blocks of the first file system (page 15, lines 24-26 and Fig. 5). Each block includes a first area for recording the video packets and of fixed size equal to the predetermined quantity (page 1, line 40 – page 2, line 1). A second area is also included in each block for recording audio packets. The second area is a fixed size that is greater than or equal to the maximum

quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data (page 2, lines 1-4).

Independent claim 28 provides a process (page 1, lines 29-31) for recording audio and video data in a digital television receiver (page 2, lines 35-36 and Fig. 1). The receiver includes audio and video packets (page 1, lines 11-15) relating to one and the same program, simultaneous accumulation (page 1, lines 34-35) of the demultiplexed video data in a first memory and of the demultiplexed audio data in a second memory and stopping the accumulation in the memories (page 1, lines 36-37) following the obtaining of a predetermined quantity of video data in the first memory. The receiver also includes recording (page 1, line 38 – page 2, line 1) of the video data accumulated in the first memory and of the audio data accumulated in the second memory, respectively, in a first area of a block whose fixed size is equal to the predetermined quantity and in a second area of this block. The size of this second area is fixed and chosen in such a way that is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data (page 2, lines 1-4).

Independent claim 32 provides an audio and video data recording device (page 5, lines 10-11). The device includes a double file system (page 15, lines 20-23 and Fig. 5). A first file system (page 15, lines 29-30 and Fig. 5, 'Stream') is adapted to files of an audio/video stream type and a second file system (page 15, lines 24-29 and Fig. 5, 'Block') is adapted to files of smaller sizes than the audio/video streams.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 16-18 and 21-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Moriyama (US Patent No. 6,067,282).

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriyama (US Patent No. 6,067,282) in view of admitted prior art.

VII. ARGUMENT

Moriyama does not anticipate claims 16-18 and 21-33. Thus, reversal of the rejection of claims 16-18 and 21-33 under 35 U.S.C. § 102(e) is respectfully requested. Moreover, Moriyama in view of admitted prior art does not make claims 19-20 unpatentable. Thus, reversal of the rejection of claims 19-20 under 35 U.S.C. § 103(a) is respectfully requested. Reversal of the Final Rejection (hereinafter termed “rejection”) of claims 16-33 under 35 U.S.C. § 102(e) and § 103(a) is respectfully requested.

Overview of the Cited References

Moriyama describes an information recording medium that includes: record information pieces logically independent of each other and constituting a hierarchical structure of hierarchical layers; layer information pieces for specifying one of the hierarchical layers; kind information pieces for indicating kinds of information relating to the record information pieces; a text group including layer related texts and record information related texts successively arranged in a mixed manner; text arrangement information pieces corresponding to the text group and arranged in pair with one of the layer information pieces and the kind information pieces corresponding to the text, the text arrangement information piece indicating a position of the text within the text group. The layer information pieces are arranged in an order in accordance with the hierarchical structure, and the kind information pieces are arranged in pair with the layer information pieces indicating the layer of the corresponding record information piece so as to specify the logical position of the corresponding record information piece within the hierarchical

structure. (See Abstract)

**Rejection of Claims 16-18 and 21-33 under 35 USC 102(e) over Moriyama (US Patent
No. 6,067,282)**

Moriyama does not anticipate claims 16-18 and 21-33. Thus, reversal of the Final Rejection (hereinafter termed “rejection”) of claims 16-18 and 21-33 under 35 U.S.C. § 102(e) is respectfully requested.

CLAIMS 16-18

The present invention as claimed in claim 16 provides a digital video reception device. The device includes means for receiving and demultiplexing a multiplexed digital stream as well as means for storing. The storage means are comprised of two file systems having different recording block sizes. The recording is performed in blocks including two areas of different fixed size, one of which is reserved for video data and the other for audio data. Once a quantity of video data corresponding to the size of the video area has been demultiplexed, a complete block is written, regardless of the quantity of audio data received at that moment. Because of the arrangement of the areas inside a block, the nature of the PES packets recorded therein is known, thus avoiding labeling of each PES packet (see page 2, lines 5-13 of the Specification). Claims 17-18 are dependent on claim 16 and all arguments presented below herein apply equally to all claims.

Moriyama describes “an information recording medium such as an optical disk of a high recording density type, which is capable of recording information such as video information, audio information and the like at a high density” (Col. 1, lines 11-15). In Moriyama, an information recording medium on which information can be recorded in a hierarchical structure and on which text information can also be recorded in relation with

the recorded information at each hierarchical layer is shown. “Record” information pieces are recorded logically independent of each other and constitute a hierarchical structure of hierarchical layers. “Layer” information pieces specify one of the hierarchical layers. “Kind” information pieces indicate the kind of information relating to the record information pieces. The layer information pieces are arranged in an order in accordance with the hierarchical structure, and the kind information pieces are arranged in pair with the layer information pieces indicating the layer of the corresponding record information piece so as to specify the logical position of the corresponding record information piece within the hierarchical structure.

Moriyama does not disclose or suggest a recording device with “means of storage comprising two file systems having different recording block sizes” as recited in claim 16 of the present invention. In Moriyama, “[s]ince data capacity of th[e] audio information is generally much smaller than that of the video information, data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 11-14). Thus, audio CDs are smaller in size than DVDs. According to the Office Action, the “video file size is larger than the audio file size” in Moriyama. Having a video file size larger than an audio file size, however, does not show or suggest the use of two file systems having different recording block sizes as in the present claimed invention. In fact, file size is not the same as block size. As described in the present specification, each recording block comprises a first area for recording the video packets and a second area for recording the audio packets (see page 3, lines 6-11 of the Specification). Block size corresponds to the partitioning of the recording medium (see page 15, line 20-23 and Fig 5 of the Specification). Any recording medium can be partitioned in a certain number of blocks of a fixed size in order to enable its management by a file system. The present claimed invention recognizes that a single file system is not efficient when recording different types of data having a big difference in

size, especially when one type of data is video data. Therefore, the present claimed invention proposes two file systems in order to manage two types of data. This is entirely different from Moriyama. In Moriyama, the data structure to be accessed is arranged in an efficient way. However, Moriyama neither discloses nor suggests that the recording medium is partitioned into recording blocks of different sizes. Thus, Moriyama neither discloses nor suggests “means of storage comprising two file systems having different recording block sizes” as recited in claim 16 of present invention.

The Office Action argues that the “block sizes of the two file system in Moriyama are not the same. Moriyama discloses the VOB unit is provided with [a] navigation pack, video pack, audio pack, and sub-picture pack. Moriyama further discloses MPEG 2 method is adopted at the time of recording the video information on to the DVD. Encoding bit rate of audio signal is not the same as encoding bit rate of video signal ... they have different number of bits” (page 2, lines 11-15 of the Office Action). Applicant respectfully disagrees. Moriyama does not show or suggests two file systems, as in the present claimed invention. Furthermore, there is no mention or suggestion of different block sizes. Merely describing different bit sizes of audio and video data, as in Moriyama, is completely unrelated to different block sizes in two file systems, as in the present claimed invention. Furthermore, the size of the data to be stored does not suggest or disclose that there is a file system that has different recording block sizes, as in the present claimed invention.

The Office Action further argues that the compression ratio of the video signal must be higher than the compression ratio of the audio signal, according to the MPEG standard. “A/V bit-rates can range from about 60Kbps to 15 Mbps for MPEG video, from about 56-384 Kbps for MPEG audio, and between about 32-640 Kbps for AC-3 audio. Therefore, Moriyama discloses two file systems having different recording block sizes” (Office

Action, pages 2-3). Applicant respectfully disagrees. Although the MPEG standard contains different bit rates for audio and video, this is completely unrelated to block sizes. A size of a file (audio, video, etc.) is completely different than a block size. As discussed in the specification, a block size corresponds to the partitioning of the recording medium. Any recording medium may be partitioned in a certain number of blocks of a fixed size in order to enable management by a file system. However, the present specification recognizes that a single file system is not efficient when recording different types of data having a big difference in size, especially when one type of data is video data. Therefore, the present claimed invention proposes a double file system, in order to allow management of two types of data. Moriyama, on the other hand, records data in a hierarchical structure to achieve efficiency when accessing the data. Moriyama does not partition the recording medium into recording blocks of different sizes as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “means of storage comprising two file systems having different recording block sizes” as recited in claim 16 of the present invention.

Additionally, the Office Action cites Col. 18, lines 9-17 and Fig. 19 of Moriyama as being equivalent to “two file systems having different recording block sizes” as in the present claimed invention. Applicant respectfully disagrees. Col. 18, lines 9-17 of Moriyama merely states that the “data capacity of th[e] audio information is generally much smaller than that of the video information” (Col. 18, lines 12-13) and therefore, “data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 13-14). However, Moriyama does not mention or suggest that “two file systems hav[e] different recording block sizes” as recited in the present claimed invention. As seen in the above, even if the Moriyama reference was interpreted as showing that video file sizes are larger than audio file sizes, as in the Office Action, different file sizes are not equivalent to “different

recording block sizes” as in claim 16 of the present invention. Furthermore, Fig. 19 of Moriyama merely shows a signal “Sdm” that is input into the “Demultiplexer 86” to yield audio and video signals. Although Fig. 19 shows a storage means “RAM 100a,” this storage means does not “compris[e] two file systems having different recording block sizes” as recited in claim 16 of the present invention. RAM 100a stores information such as the “DSI packet 51 for each navi-pack 41 (refer to FIG. 1)” (Col. 22, lines 47-48) and the “text information 121 included in the video manager 2” (Col. 22, lines 50-51). However, the storage (RAM 100a) in Moriyama neither shows nor suggests storage means “comprising two file systems having different recording block sizes” as recited in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “[a] digital video reception device comprising ... means of storage comprising two file systems having different recording block sizes” as recited in claim 16 of the present invention.

Additionally, the Office Action erroneously states that “Moriyama discloses a recording device having triple file system, video, audio and sub-picture” (Office Action, page 3). Although Moriyama describes a recording device capable of recording and reading video, audio and sub-pictures (such as a secondary picture displaying text lyrics in karaoke songs or subtitles in a movie), these are not three types of file systems. These three categories merely describe the type of data and are completely unrelated to file systems. An example of a “file system being devised in a conventional manner [is] of the UNIX type” (Specification, page 15, lines 25-26). The present claimed invention recognizes that a single file system is not efficient when recording different types of data (i.e. video, audio etc.). Therefore, the claimed invention proposes storage means including two file systems in order to manage two types of data. This is not suggested or mentioned anywhere in Moriyama. Therefore, as Moriyama does not contain a triple file system (or two file systems), Moriyama neither discloses nor suggests “means of storage comprising

two file systems having different recording block sizes” as recited in claim 16 of the present invention.

Furthermore, the objective of the present claimed invention is to record, “on a data medium such as a hard disk, ... in blocks comprising (among other things) two areas of fixed size, one of which is reserved for video and the other for audio data. Once a quantity of video data corresponding to the size of the video area has been demultiplexed, a complete block is written, regardless of the quantity of audio data received at that moment” (Specification, page 2, lines 5-10). “One of the envisaged applications of the disk is the non-real time reading of a program currently being recorded. For example, the television viewer watching a live program has to go away for a few minutes and wishes to resume watching at the exact moment at which this was interrupted. When he goes away, he starts the recording of the program. On his return, he triggers the reading of the program, although the recording of the latter is still in progress. Given that the read/write head must perform movements from the reading areas to the writing areas and vice versa and that the time of movement of the head is of the order of 10ms for the disk used within the framework of the present example, certain precautions have to be taken to guarantee the minimum bit rate required for reading and writing” (Specification, page 18, lines 13-24). Thus, the present claimed invention contains means of storage that includes “two file systems having different recording block sizes” to accomplish this. On the other hand, the objective of Moriyama is to “provide an information recording medium on which information can be recorded on in a hierarchical structure and on which text information can also be recorded in relation with the recorded information at each hierarchical layer” (Col. 2, lines 5-10). “It is another object of ... [Moriyama] to provide an apparatus for recording the information including the text information on the recording medium, and an apparatus for reproducing the recorded information, which is capable of searching for text

information quickly” (Col. 2, lines 11-15). This is used “[i]n the application of [a] video CD to a karaoke device, [where] the text information (character information) relating to the recorded video information is recorded on the video CD, and the text information is displayed on a monitor to notify a user of the contents of the recorded video information and/or related information” (Col. 1, lines 39-43). Thus, the objective of Moriyama, which is to provide an improved karaoke system, is wholly unlike the objective of the present claimed invention, which is to perform a multitude of functions, including consecutively reading and writing to a disk. In fact, Moriyama does not even address the need of two file systems that have different recording block sizes in order to accomplish the desired objectives, as in the present claimed invention. It is the present claimed invention that overcomes the problems faced by systems such as Moriyama that do not address the need of two file systems to record video and other data using different block sizes in an efficient manner.

Additionally, Moriyama merely teaches data management only at the application level. Moriyama deals with the file manager means which is wholly unlike the present claimed invention which deals with file system means. One example of a file system organization is of the UNIX type (referred to as the ‘block’ partition). “A characteristic of this partition is however that it favors random access to the data, for example through the use of multiple indirect addressing” (Specification, page 15, lines 26-28). The other file system partition is referred to as “the ‘stream’ partition [which] has the characteristic of optimizing sequential access. The file system managing the two partitions comprises on the hard disk [as] a boot block” (Specification, page 15, lines 30-32). A “‘stream’ block comprises 256 sectors. This is to be compared with the size of a block of the ‘block’ partition, namely 4 sectors” (Specification, page 15, line 37 – page 16, line 2). Thus, the present claimed invention describes two distinct file systems that have different recording

block sizes. On the other hand, although Moriyama describes storing different types of data such as audio and video, Moriyama is not concerned with having two file systems that have different recording block sizes as in the present claimed invention. Moriyama does not have two different partitions (file systems) that have different recording block sizes, as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “means of storage comprising two file systems having different recording block sizes” as recited in claim 16 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. As claims 17 and 18 are dependent on claim 16, all above arguments also apply to each of these claims. Consequently, it is respectfully requested that the rejection of claims 16-18 under 35 USC 102(e) be withdrawn.

CLAIM 21

Dependent claim 21 is dependent on independent claim 16 and Applicant respectfully submits that it is allowable for the same reasons as claim 16. Additionally, claim 21 provides that the storage means include a recordable disk comprising a single boot block, a first area reserved for the service data of the first file system and for the corresponding data blocks, and a second area reserved for the service data of the second file system and for the corresponding data blocks. These features are neither suggested nor disclosed by Moriyama.

The Office Action cites Col. 6, line 61 – Col. 7, line 19 and DVD 1 (in the figures) of Moriyama as showing the feature of “a first area reserved for the service data of the first file system and of the corresponding data blocks, a second area reserved for the service

data of the second file system and for the corresponding data blocks” as in the present claimed invention. However, the cited passage and figure merely describes “a lead in area LI at its most inner circumferential portion and a lead out area LO at its most circumferential portion, between which video information and audio information are recorded such that they are divided into a plurality of VTSs 3, each of which has a unique ID” (Col. 6, lines 62-67). These portions are the physical format of a DVD. “Ahead of the area where the VTSs 3 are recorded, a video manager 2 is recorded” (Col. 7, lines 12-14). The “information recorded in the video manager 2, for example, information related to the whole video and audio information recorded on the DVD 1, such as a menu for accessing each title, information for preventing an illegal copy, an access table for directly accessing each title, and so on, is recorded” (Col. 7, lines 14-19). Moriyama merely describes the physical format of a DVD and does not mention or suggest a first and second area reserved for the service data of the first and second file system, respectively, and for the corresponding data blocks, as in the present claimed invention. Although the VTSs (Video Title Sets) in Moriyama may reserve areas for “attributes, such as the number, the specification, the corresponding languages, etc. of audio and video streams” (Col. 7, lines 4-6), the VTSs are not areas reserved for the service data of file systems. Furthermore, Moriyama does not contain two different data blocks as in the present claimed invention. Moriyama may contain two different files, such as audio and video, but files are not the same as data blocks as in the present claimed invention. Each data block results from a corresponding partitioned recording medium. Moriyama does not describe or suggest two areas reserved for two file systems and corresponding data blocks. Therefore, Moriyama neither discloses nor suggests that “the storage means comprise a recordable disk comprising a single boot block, a first area reserved for the service data of the first file system and for the corresponding data blocks, and a second area reserved for the service

data of the second file system and for the corresponding data blocks” as recited in claim 21 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. Consequently, it is respectfully requested that the rejection of claim 21 under 35 USC 102(e) be withdrawn.

CLAIMS 22-27

Dependent claims 22-27 are dependent on independent claim 16 and Applicant respectfully submits that they are allowable for the same reasons as claim 16. Additionally, claim 22 provides that a first video writing memory is included for accumulating a predetermined quantity of demultiplexed video packets and a second audio writing memory is included for accumulating demultiplexed audio packets. Storage means are adapted to store the remultiplexed audio and video packets in the form of blocks of the first file system. Each block includes a first area for recording the video packets and a second area for recording for audio packets. Moriyama neither discloses nor suggests these features. Claims 22-27 include similar features and therefore, all arguments presented below herein apply equally to all claims.

The Office Action cites Col. 7, lines 51-67, Col. 18, lines 9-17 and Fig. 19 of Moriyama as showing the same features as the claimed invention in claim 22. In the first cited passage, Moriyama describes the different packs included in one VOB unit. These include “a navi-pack (a navigation pack) 41 ... a video pack 42 ... an audio pack 43 ... and a sub picture pack 44” (Col. 7, lines 51-54). Fig. 19 shows the corresponding buffers and decoders for video, audio, sub picture, etc. information. However, Moriyama, nowhere

shows or suggests “means of storage being adapted to ... audio and video packets in the form of blocks of the first file system, each block comprising a first area for recording video packets of fixed size equal to said predetermined quantity, and a second area for recording for audio packets and of fixed size such that is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data” as recited in claim 22 of the present invention.

Additionally, Col. 18, lines 9-17, cited by the Office Action, merely states that the “data capacity of th[e] audio information is generally much smaller than that of the video information” (Col. 18, lines 12-13) and therefore, “data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 13-14). However, Moriyama does not mention or suggest “blocks of a first file system, each block comprising a first area ... and a second area” as recited in the present claimed invention. Moriyama merely describes audio and video files, where the file sizes may vary. Different file sizes are not equivalent to blocks of a file system, where each block includes two different areas as in claim 22 of the present claimed invention. Furthermore, Fig. 19 of Moriyama merely shows a signal “Sdm” that is input into the “Demultiplexer 86” to yield audio and video signals. Although Fig. 19 shows a storage means “RAM 100a,” this storage means is not adapted “to store remultiplexed audio and video packets in the form of blocks of the first file system, each block comprising a first area ... and a second area” as recited in claim 22 of the present invention. RAM 100a stores information such as the “DSI packet 51 for each navi-pack 41 (refer to FIG. 1)” (Col. 22, lines 47-48) and the “text information 121 included in the video manager 2” (Col. 22, lines 50-51). However, the storage (RAM 100a) in Moriyama neither shows nor suggests the storage means as provided in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “means of storage being adapted to ... audio and video packets in the form of blocks of the first file system, each block

comprising a first area for recording video packets of fixed size equal to said predetermined quantity, and a second area for recording for audio packets and of fixed size such that is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data” as recited in claim 22 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. As claims 23 - 27 are dependent on claims 16 and 22, all above arguments also apply to each of these claims. Consequently, it is respectfully requested that the rejection of claims 22-27 under 35 USC 102(e) be withdrawn.

CLAIMS 28-31

Independent claim 28 provides a process for recording audio and video data in a digital television receiver. Audio and video packets are demultiplexed relating to one and the same program. Demultiplexed video data in a first memory and demultiplexed audio data in a second memory is simultaneously accumulated. The accumulation in the memories following the obtaining of a predetermined quantity of video in the first memory is stopped. The video data accumulated in the first memory and the audio data accumulated in the second memory, respectively, is recorded in a first area of a block whose fixed size is equal to the predetermined quantity and in a second area of this block, the size of this second area is fixed and chosen in such a way that it is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data. Claims 29-31 are dependent on claim 28 and all arguments presented below herein apply equally to all claims.

Moriyama describes “an information recording medium such as an optical disk of a high recording density type, which is capable of recording information such as video information, audio information and the like at a high density” (Col. 1, lines 11-15). Moriyama does not disclose or suggest a “process for recording audio and video data in a digital television receiver ... recording of the video data accumulated in said first memory and of the audio data accumulated in the second memory respectively in a first area of a block ... and in a second area of this block” as recited in claim 28 of the present invention. Instead, Moriyama describes the different packs included in one VOB unit. These include “a navi-pack (a navigation pack) 41 ... a video pack 42 ... an audio pack 43 ... and a sub picture pack 44” (Col. 7, lines 51-54). Fig. 19 shows the corresponding buffers and decoders for video, audio, sub picture, etc. information. Although Moriyama contains different types of data, Moriyama does not show or suggest having a first and second memory in a block that contains a first and second area, as in the present claimed invention. Moreover, the fixed size of the “first area of a block ... is equal to said predetermined quantity and ... the size of this second area ... [of this block is] fixed and chosen in such a way that it is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining said predetermined quantity of video data” as recited in claim 28 of the present invention. Thus, the two areas of a block each have fixed sizes determined by different methods. The first area of the block has a fixed size equal to the predetermined quantity (of video data in the first memory) and the second area has a fixed size “chosen in such a way that is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining said predetermined quantity of video data.” Moriyama does not show or suggest the usage of blocks that contain two distinct areas. Moriyama also does not show or suggest the determination of the sizes of the two areas, as shown in the present claimed invention. Thus, Moriyama neither discloses nor suggests a “process for recording audio and video data in a digital television receiver ... recording of

the video data accumulated in said first memory and of the audio data accumulated in the second memory respectively in a first area of a block whose fixed size is equal to said predetermined quantity and in a second area of this block, the size ... being fixed and chosen in such a way that it is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining said predetermined quantity of video data” as recited in claim 28 of the present invention.

In Moriyama, “[s]ince data capacity of th[e] audio information is generally much smaller than that of the video information, data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 11-14). Thus, audio CDs are smaller in data capacity than DVDs. According to the Office Action, the “video file size is larger than the audio file size” in Moriyama. Having a video file size larger than an audio file size, however, does not show or suggest a block containing a first and second area, where the sizes of the first and second areas are fixed as in the present claimed invention. In fact, file size is not the same as block size. As claimed in claim 28, a block comprises a first area whose “fixed size is equal to said predetermined quantity ... and ... a second area ... the size of this second area being fixed and chosen in such a way that it is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining said predetermined quantity of video data.” Block size corresponds to the partitioning of the recording medium (see page 15, line 20-23 and Fig 5 of the Specification). Any recording medium can be partitioned in a certain number of blocks of a (single) fixed size in order to enable its management by a file system. The present claimed invention recognizes that a block used for recording video data can be divided into two different fixed areas, where the sizes of the areas of the blocks are calculated by different methods. Thus, the present claimed invention proposes a block comprising two areas. This is entirely different from Moriyama. In Moriyama, the data structure to be accessed is arranged in an efficient way.

However, Moriyama neither discloses nor suggests recording blocks consisting of a first and second area. Thus, Moriyama neither discloses nor suggests the features of claim 28 of the present invention.

Additionally, Col. 18, lines 9-17 of Moriyama states that the “data capacity of th[e] audio information is generally much smaller than that of the video information” (Col. 18, lines 12-13) and therefore, “data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 13-14). However, Moriyama does not mention or suggest “a first area of a block ... and ... a second area” of the same block as recited in the present claimed invention. As seen in the above, even if the Moriyama reference was interpreted as showing that video file sizes are larger than audio file sizes, as in the Office Action, different file sizes are not equivalent to a block containing two areas of two different fixed sizes as in claim 28 of the present invention. Furthermore, Fig. 19 of Moriyama shows a signal “Sdm” that is input into the “Demultiplexer 86” to yield audio and video signals. Although Fig. 19 shows a memory “RAM 100a,” this is not the same as “recording of the video data accumulated in” a first and “second memory respectively in a first area of a block ... and in a second area of this block” as recited in claim 28 of the present invention. RAM 100a in Moriyama stores information such as the “DSI packet 51 for each navi-pack 41 (refer to FIG. 1)” (Col. 22, lines 47-48) and the “text information 121 included in the video manager 2” (Col. 22, lines 50-51). However, the storage (RAM 100a) in Moriyama neither shows nor suggests first and second areas of a block as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “recording of the video data accumulated in said first memory and of the audio data accumulated in the second memory respectively in a first area of a block whose fixed size is equal to said predetermined quantity and in a second area of this block, the size ... being fixed and chosen in such a way that it is greater than or equal to the maximum quantity of audio data which can be

accumulated while obtaining said predetermined quantity of video data” as recited in claim 28 of the present invention.

The present claimed invention accumulates video data and audio data in separate memories, and records both data on the same block. Moriyama, however, is not concerned with recording data accumulated in said first memory in a first area of the block, and the audio data accumulated in the second memory in a second area of the same block. The principle of recording both audio and video data in the same block is to provide a means for storing such that a first partition provides mainly random access and implementing multiple indirect addressing while a second partition is reserved for audio and video stream recording for mainly sequential access and implementing simple indirect addressing. The video and audio data accumulated in memory are recorded into the same block of this second partition. Having two partitions with different characteristics makes it possible to optimize recording and reading depending on the nature of the data. Specifically, the data of audio and video type primarily require sequential access, whereas data of “service” or “private” type, for example, databases for constructing a program guide or else program code files, can be managed more efficiently with random access. It is thus possible to store data of different type on a single medium, for example a hard disk (page 3, lines 17-24).

The Office Action contends that “Moriyama discloses the video packs” where “one or a plurality of GOPs are recorded within one VOB unit 30. Moriyama further discloses the audio pack or the sub picture pack are recorded (see col. 9 lines 51-67)” on page 3. Although Moriyama describes different types of packs on a single VOB unit, Moriyama does not contain a block that has a first and second area of fixed sizes, as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests the claimed “recording of the video data accumulated in said first memory and of the audio data

accumulated in the second memory respectively in a first area of a block whose fixed size is equal to said predetermined quantity and in a second area of this block” as recited in claim 28 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. As claims 29-31 are dependent on independent claim 28, all above arguments also apply to each of these claims. Consequently, it is respectfully requested that the rejection of claims 28-31 under 35 USC 102(e) be withdrawn.

CLAIMS 32-33

Independent claim 32 provides an audio and video data recording device including a double file system wherein the first system is adapted to files of an audio/video stream type and wherein a second file system is adapted to files of smaller sizes than the audio/video streams. Dependent claim 33 is dependent upon claim 32 and all arguments presented below herein apply equally to both claims.

Moriyama does not disclose or suggest a recording device having a double file system as in the present claimed invention. In the present claimed invention, each recording block comprises a first area for recording the video packets and a second area for recording the audio packets (page 3, lines 6-11). Block size corresponds to the partitioning of the recording medium (page 15, line 20-23 and Fig 5). Any recording medium can be partitioned in a certain number of blocks of a fixed size in order to enable its management by a file system. The present claimed invention recognizes that a single file system is not efficient when recording different types of data having a big difference in size, especially when one type of data is video data. Therefore, the present claimed invention proposes two

file systems in order to manage two types of data. This is entirely different from Moriyama. In Moriyama, the data structure is arranged in an efficient way to be accessed, but Moriyama neither discloses nor suggests that the recording medium is partitioned into recording blocks of different sizes. Thus, Moriyama neither discloses nor suggests “a double file system wherein a first system is adapted to files of an audio/video stream type and wherein a second file system is adapted to files of smaller size than the audio/video streams” as recited in claim 32 of the present invention.

The Office Action contends that the compression ratio of the video signal must be higher than the compression ratio of the audio signal, according to the MPEG standard. “A/V bit-rates can range from about 60Kbps to 15 Mbps for MPEG video, from about 56-384 Kbps for MPEG audio, and between about 32-640 Kbps for AC-3 audio. Therefore, Moriyama discloses two file systems” (see Office Action, pages 2-3). Applicant respectfully disagrees. Although the MPEG standard contains different bit rates for audio and video, this is completely unrelated to a first file system that is adapted to files of an audio/video stream type and a second file system that is adapted to files of smaller sizes than the audio/video streams as in the present claimed invention. Additionally, the present specification recognizes that a single file system is not efficient when recording different types of data having a big difference in size, especially when one type of data is video data. Therefore, the present claimed invention proposes a double file system, in order to allow management of two types of data. Moriyama, on the other hand, records data in a hierarchical structure to achieve efficiency when accessing the data. Moriyama does not disclose or suggest a double file system as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “a double file system wherein a first system is adapted to files of an audio/video stream and wherein a second file system is adapted to

files of smaller size than the audio/video streams” as recited in claim 32 of the present invention.

Additionally, the Office Action erroneously states that “Moriyama discloses a recording device having triple file system, video, audio and sub-picture” (Office Action, page 3). Although Moriyama describes a recording device capable of recording and reading video, audio and sub-pictures (such as a secondary picture displaying text lyrics in karaoke songs or subtitles in a movie), these are not three types of file systems. These three categories merely describe the type of data and are completely unrelated to file systems. An example of a “file system being devised in a conventional manner [is] of the UNIX type” (Specification, page 15, lines 25-26). The present claimed invention recognizes that a single file system is not efficient when recording different types of data (i.e. video, audio etc.). Therefore, the claimed invention proposes a double file system in order to manage files of different sizes. This is not suggested or mentioned anywhere in Moriyama. Therefore, as Moriyama does not contain a triple file system (or two file systems), Moriyama neither discloses nor suggests “a double file system wherein a first system is adapted to files of an audio/video stream and wherein a second file system is adapted to files of smaller size than the audio/video streams” as recited in claim 32 of the present invention.

Additionally, Col. 18, lines 9-17 of Moriyama state that the “data capacity of th[e] audio information is generally much smaller than that of the video information” (Col. 18, lines 12-13) and therefore, “data of the plural CDs may be recorded on a single DVD” (Col. 18, lines 13-14). However, Moriyama does not mention or suggest “a double file system” as recited in the present claimed invention. As seen in the above, even if the Moriyama reference was interpreted as showing that video file sizes are larger than audio

file sizes, as in the Office Action, the different file sizes are not the same as “a double file system wherein a first system is adapted to files ... and wherein a second file system is adapted to files of smaller size” than the first files as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “a double file system wherein a first system is adapted to files of an audio/video stream and wherein a second file system is adapted to files of smaller size than the audio/video streams” as recited in claim 32 of the present invention.

Furthermore, “[o]ne of the envisaged applications of the disk is the non-real time reading of a program currently being recorded. For example, the television viewer watching a live program has to go away for a few minutes and wishes to resume watching at the exact moment at which this was interrupted. When he goes away, he starts the recording of the program. On his return, he triggers the reading of the program, although the recording of the latter is still in progress. Given that the read/write head must perform movements from the reading areas to the writing areas and vice versa and that the time of movement of the head is of the order of 10ms for the disk used within the framework of the present example, certain precautions have to be taken to guarantee the minimum bit rate required for reading and writing” (Specification, page 18, lines 13-24). Thus, the present claimed invention contains an “audio and video data recording device” including “a double file system” to accomplish this. On the other hand, the objective of Moriyama is to “provide an information recording medium on which information can be recorded on in a hierarchical structure and on which text information can also be recorded in relation with the recorded information at each hierarchical layer” (Col. 2, lines 5-10). “It is another object of ... [Moriyama] to provide an apparatus for recording the information including the text information on the recording medium, and an apparatus for reproducing the recorded information, which is capable of searching for text information quickly” (Col. 2,

lines 11-15). This is used “[i]n the application of [a] video CD to a karaoke device, [where] the text information (character information) relating to the recorded video information is recorded on the video CD, and the text information is displayed on a monitor to notify a user of the contents of the recorded video information and/or related information” (Col. 1, lines 39-43). Thus, the objective of Moriyama, which is to provide an improved karaoke system, is wholly unlike the objective of the present claimed invention, which is to perform a multitude of functions, including consecutively reading and writing to a disk. In fact, Moriyama does not even address the need of a double file system in order to accomplish the desired objectives, as in the present claimed invention. It is the present claimed invention that overcomes the problems faced by systems such as Moriyama that do not address the need of a double file system to record video and other data in an efficient manner.

Additionally, Moriyama merely describes data management only at the application level. Moriyama deals with the file manager means which is wholly unlike the present claimed invention which deals with file system means. One example of a file system organization is of the UNIX type (referred to as the ‘block’ partition). “A characteristic of this partition is however that it favors random access to the data, for example through the use of multiple indirect addressing” (Specification, page 15, lines 26-28). The other file system partition is referred to as “the ‘stream’ partition [which] has the characteristic of optimizing sequential access. The file system managing the two partitions comprises on the hard disk [as] a boot block” (Specification, page 15, lines 30-32). A “‘stream’ block comprises 256 sectors. This is to be compared with the size of a block of the ‘block’ partition, namely 4 sectors” (Specification, page 15, line 37 – page 16, line 2). Thus, the present claimed invention describes a double file system. On the other hand, although Moriyama describes storing different types of data such as audio and video, Moriyama is

not concerned with having a double file system as in the present claimed invention. Moriyama does not even mention or suggest having two different partitions (file systems), as in the present claimed invention. Therefore, Moriyama neither discloses nor suggests “[a]n audio and video data recording device comprising: a double file system” as recited in claim 32 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. As claim 33 is dependent on independent claim 32, all above arguments also apply to both of these claims. Consequently, it is respectfully requested that the rejection of claims 16-18 under 35 USC 102(e) be withdrawn.

Rejection of Claims 19-20 under 35 U.S.C. 103(a) over Moriyama (U.S. Patent 6,067,282) in view of the admitted prior art

Reversal of the rejection of claims 19-20 under 35 U.S.C. 103(a) as being unpatentable over Moriyama in view of the admitted prior art is respectfully requested because the rejection makes crucial errors in interpreting the cited references. The rejection erroneously states that claims 19-20 are made unpatentable by Moriyama in view of the admitted prior art.

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596, 1598 (Fed.Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (CCPA 1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art

references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion, or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed.Cir. 1988), *cert. denied*, 488 U.S. 825 (1988); *Ashland Oil Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 28, 293, 227 USPQ 657, 664 (Fed.Cir. 1985), *cert. denied*, 475 U.S. 1017 (1986); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed.Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed.Cir. 1992).

CLAIMS 19-20

Claim 19 provides a digital video reception device that receives and demultiplexes a multiplexed digital stream and stores the demultiplexed stream on two file systems having different recording block sizes. The first file system is adapted to sequentially access the recorded data and the second file system is adapted to randomly access the data recorder. Claim 20 is dependent on claim 19 and all arguments presented below herein apply equally to both claims.

The Office Action contends that “Moriyama discloses the limitations” of claims 19 and 20 “except adapting the first file system to sequential access of the recorded data and simple indirect accessing, while” adapting “the second file system to random accessing and multiple indirect accessing ... The specification discloses the conventional UNIX type favors random access to the data through multiple indirect addressing. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to adopt sequential and random access of the recorded video and audio data in order to search

the content of the memory in different order.” Applicant respectfully disagrees. Moriyama, as discussed above in regards to claim 16, neither discloses nor suggests “means of storage comprising two file systems having different recording block sizes” as recited in the present claimed invention. The specification of the present invention merely describes one example of a file system (UNIX). Even if Moriyama contained a file system such as UNIX, which is referred to by the Office Action as admitted prior art, Moriyama would not contain a “first file system” and a “second file system” where “the first file system comprises simple indirect addressing, while the second file system comprises multiple indirect addressing” as recited in claim 19 of the present invention.

The Office Action contends that the “block sizes of the two file system in Moriyama are not the same. Moriyama discloses the VOB unit is provided with navigation pack, video pack, audio pack, and sub-picture pack. Moriyama further discloses MPEG 2 method is adopted at the time of recording the video information on to the DVD. Encoding bit rate of audio signal is not the same as encoding bit rate of video signal ... they have different number of bits” on page 2 of the Office Action (in rejection of claim 16). Applicant respectfully disagrees. Moriyama does not show or suggests two file systems, as in the present claimed invention. The admitted prior art system (UNIX) is only one example of a file system. The combination of Moriyama and a UNIX system still does not show two file systems, as in the present claimed invention. Furthermore, “the first file system is adapted to sequential access of the recorded data, while the second file system is adapted to random access of the data recorded therein” in claim 19 of the present invention. As Moriyama combined with the admitted prior art does not contain two file systems, Moriyama does not describe the features of the present claimed invention.

As can be seen in the specification, any recording medium may be partitioned in a certain number of blocks of a fixed size in order to enable management by a file system. However, the present specification recognizes that a single file system is not efficient when recording different types of data having a big difference in size, especially when one type of data is video data. The two file systems are adapted to two different types of access of the recorded data. Therefore, the present claimed invention proposes a double file system, in order to allow management of two types of data. Moriyama combined with the admitted prior art, on the other hand, records data in a hierarchical structure to achieve efficiency when accessing the data. Moriyama, when taken alone or in combination with the admitted prior art, does not disclose or suggest two different file systems as in the present claimed invention. Therefore, Moriyama, when taken alone or in combination with the admitted prior art, neither discloses nor suggests a “first file system” and a “second file system” where “the first file system comprises simple indirect addressing, while the second file system comprises multiple indirect addressing” as recited in claim 19 of the present invention.

The present claimed invention gives an example of a “file system being devised in a conventional manner [that is] of the UNIX type” (Specification, page 15, lines 25-26). The present claimed invention recognizes that a single file system is not efficient when recording different types of data (i.e. video, audio etc.). Therefore, the claimed invention proposes storage means including two file systems in order to manage two types of data. This is not suggested or mentioned anywhere in Moriyama. Merely describing different types of packs, as in Moriyama, neither discloses nor suggests different types of file systems, as in the present claimed invention. Furthermore, even if Moriyama was combined with the admitted prior art, as suggested by the Office Action, the combination still does not contain two file systems. Therefore, Moriyama combined with the admitted

prior art, does not disclose or suggest one file system that is adapted to sequential access of the recorded data and another file system that is adapted to random access of the recorded data as in the present claimed invention. Merely having one UNIX type file system combined with Moriyama does not show or suggest two file systems, as in the present claimed invention. Therefore, as Moriyama combined with the admitted prior art, does not contain two file systems, the combination neither discloses nor suggests a “first file system” and a “second file system” where “the first file system comprises simple indirect addressing, while the second file system comprises multiple indirect addressing” as recited in claim 19 of the present invention.

Furthermore, the objective of the present claimed invention is to record, “on a data medium such as a hard disk, ... in blocks comprising (among other things) two areas of fixed size, one of which is reserved for video and the other for audio data. Once a quantity of video data corresponding to the size of the video area has been demultiplexed, a complete block is written, regardless of the quantity of audio data received at that moment” (Specification, page 2, lines 5-10). “One of the envisaged applications of the disk is the non-real time reading of a program currently being recorded. For example, the television viewer watching a live program has to go away for a few minutes and wishes to resume watching at the exact moment at which this was interrupted. When he goes away, he starts the recording of the program. On his return, he triggers the reading of the program, although the recording of the latter is still in progress. Given that the read/write head must perform movements from the reading areas to the writing areas and vice versa and that the time of movement of the head is of the order of 10ms for the disk used within the framework of the present example, certain precautions have to be taken to guarantee the minimum bit rate required for reading and writing” (Specification, page 18, lines 13-24). Thus, the present claimed invention contains means of storage that includes “two file

systems having different recording block sizes” to accomplish this. On the other hand, the objective of Moriyama is to “provide an information recording medium on which information can be recorded on in a hierarchical structure and on which text information can also be recorded in relation with the recorded information at each hierarchical layer” (Col. 2, lines 5-10). “It is another object of ... [Moriyama] to provide an apparatus for recording the information including the text information on the recording medium, and an apparatus for reproducing the recorded information, which is capable of searching for text information quickly” (Col. 2, lines 11-15). This is used “[i]n the application of [a] video CD to a karaoke device, [where] the text information (character information) relating to the recorded video information is recorded on the video CD, and the text information is displayed on a monitor to notify a user of the contents of the recorded video information and/or related information” (Col. 1, lines 39-43). Thus, the objective of Moriyama, which is to provide an improved karaoke system, is wholly unlike the objective of the present claimed invention, which is to perform a multitude of functions, including consecutively reading and writing to a disk. In fact, Moriyama, when taken alone or in combination with the admitted prior art, does not even address the need of two file systems, “wherein the first file system is adapted to sequential access of the recorded data, while the second file system is adapted to random access of the data recorded therein” in order to accomplish the desired objectives, as in the present claimed invention. It is the present claimed invention that overcomes the problems faced by systems such as Moriyama that do not address the need of two file systems to record video and other data using different block sizes in an efficient manner.

Additionally, Moriyama merely describes data management only at the application level. Moriyama deals with the file manager means which is wholly unlike the present claimed invention which deals with file system means. One example of a file system

organization is of the UNIX type (referred to as the 'block' partition). "A characteristic of this partition is however that it favors random access to the data, for example through the use of multiple indirect addressing" (Specification, page 15, lines 26-28). The other file system partition is referred to as "the 'stream' partition [which] has the characteristic of optimizing sequential access. The file system managing the two partitions comprises on the hard disk [as] a boot block" (Specification, page 15, lines 30-32). Thus, the present claimed invention describes two distinct file systems that utilize sequential access and random access. On the other hand, although Moriyama describes storing different types of data such as audio and video, Moriyama is not concerned with having two file systems that have different accessing schemes as in the present claimed invention. Additionally, even if Moriyama was combined with the admitted prior art, as suggested by the Office Action, the combination would be a UNIX file system that deals with file manager means. The combined system, however, would not show or suggest two file systems, as in the present claimed invention. Therefore, Moriyama, when taken alone or in combination with the admitted prior art, neither discloses nor suggests a "first file system" and a "second file system" where "the first file system comprises simple indirect addressing, while the second file system comprises multiple indirect addressing" as recited in claim 19 of the present invention.

In view of the above remarks, Applicant respectfully submits that there is no 35 USC 112 compliant enabling disclosure in Moriyama of the claimed feature. As claim 20 is dependent on claim 19, all above arguments also apply to both of these claims. Consequently, it is respectfully requested that the rejection of claims 19 and 20 under 35 USC 103(a) be withdrawn.

VIII CONCLUSION

Moriyama, when taken alone or in combination with admitted prior art, does not disclose or suggest two file systems that have different recording block sizes as in the present claimed invention. Moriyama also does not disclose or suggest a first area and second area of a block where data is recorded in memory. The present claimed invention performs a multitude of functions, including consecutively reading and writing to a disk. Moriyama is unable to perform such a function, as Moriyama does not contain two file systems as in the present claimed invention. The prior art, as admitted in the specification, merely describes an example of a file system, which is the UNIX system. Moriyama does not contain two file systems and UNIX is just an example of one type of file system. Therefore, Moriyama, when taken alone or in combination with admitted prior art, neither discloses nor suggests "two file systems having different recording block sizes" as recited in claim 16 the present invention and "recording ... the video data ... and the audio data ... in a first area of a block ... and ... a second area of this block" as recited in claim 28 of the present invention. As independent claim 32 is similar in scope to independent claim 16, all above arguments apply to both of these claims. Accordingly it is respectfully submitted that the rejection of Claims 16-33 should be reversed.

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APPENDIX I - APPEALED CLAIMS

Claims 1-15 (Cancelled)

16. (Previously Presented) A digital video reception device, comprising:
means of reception and of demultiplexing of a multiplexed digital stream; and
means of storage comprising two file systems having different recording block
sizes.

17. (Previously Presented) The device as claimed in claim 16, wherein
the blocks of the first file system are of large size and adapted to the recording of
audio/video streams and in that the blocks of the second file system are of smaller size and
adapted to the recording of files of smaller size than the audio/video streams.

18. (Previously Presented) The device as claimed in claim 16 wherein the
block size of the first file system is larger by at least an order of magnitude than the block
size of the second file system.

19. (Previously Presented) The device as claimed in claim 16, wherein
the first file system is adapted to sequential access of the recorded data, while the second
file system is adapted to random access of the data recorded therein.

20. (Previously Presented) The device as claimed in claim 19, wherein
the first file system comprises simple indirect addressing, while the second file system
comprises multiple indirect addressing.

21. (Previously Presented) The device as claimed in claim 16, wherein
the storage means comprise a recordable disk comprising a single boot block, a first area
reserved for the service data of the first file system and for the corresponding data blocks,
and a second area reserved for the service data of the second file system and for the
corresponding data blocks.

22. (Previously Presented) The device as claimed in claim 16,
comprising:

a first video writing memory for accumulating a predetermined quantity of demultiplexed video packets;

a second audio writing memory for accumulating demultiplexed audio packets; and

means of storage being adapted to store the remultiplexed audio and video packets in the form of blocks of the first file system, each block comprising a first area for recording the video packets and of fixed size equal to said predetermined quantity, and a second area for recording for audio packets and of fixed size such that it is greater than or equal to the maximum quantity of audio data which can be accumulated while obtaining the predetermined quantity of video data.

23. (Previously Presented) The device as claimed in claim 22, comprising:

a third video reading memory for reading video data from the storage means; and

a fourth audio reading memory for the reading of audio data, the respective sizes of the third and fourth memories, video and audio reading respectively, being equal to the sizes of the first and second memories, video and audio writing respectively.

24. (Previously Presented) The device as claimed in claim 22, comprising:

a writing memory for transmitting data to the storage means, which memory is organized as an area comprising N video writing memories of FIFO type and an audio writing area comprising a memory of FIFO type having the size of N audio writing memories;

means for controlling the transfer of video data to a first of the N video writing memories and of audio data to the audio writing area, the transfer of video data being continued to a next video writing memory when said first of the N video writing memories is full; and

means for storing the location, in the area for recording audio data, of the audio data corresponding to each of the N video writing memories.

25. (Previously Presented) The device as claimed in claim 24, further comprising:

means for initiating the transfer of video and audio data stored in said writing memory to the storage means as soon as one of the N video writing memories has been filled.

26. (Previously Presented) The device as claimed in claim 23, further comprising:

a reading memory for receiving data from storage means, which memory is organized as an area comprising N video reading memories of FIFO type and an audio reading area comprising a memory of FIFO type having the size of N audio reading memories;

means for controlling the transfer of video data to a first of the N video reading memories and of audio data to the audio reading area, the transfer of video data being continued to a next video reading memory when said first of the N video reading memories is full; and

means for storing the location, in the area for reading audio data, of the audio data corresponding to each of the N video reading memories.

27. (Previously Presented) The device as claimed in claim 26, further comprising:

means for initiating the transfer of video and audio data stored in said reading memory to a decoder of said data when the set of N video reading memories has been filled.

28. (Previously Presented) A process for recording audio and video data in a digital television receiver, comprising the steps of:

demultiplexing audio and video packets relating to one and the same program;

simultaneous accumulation of the demultiplexed video data in a first memory and of the demultiplexed audio data in a second memory;

stopping the accumulation in said memories following the obtaining of a predetermined quantity of video data in said first memory; and

recording of the video data accumulated in said first memory and of the audio data accumulated in the second memory respectively in a first area of a block whose fixed size is equal to said predetermined quantity and in a second area of this block, the size of this second area being fixed and chosen in such a way that it is greater than or equal to the

maximum quantity of audio data which can be accumulated while obtaining said predetermined quantity of video data.

29. (Previously Presented) The process as claimed in claim 28, wherein the ratio of the sizes of the first and second areas is such that it is greater than or equal to the maximum ratio of the bit rate of video data and of the bit rate of audio data in the digital stream.

30. (Previously Presented) The process as claimed in claim 28 further comprising the step of:

recording in each block of a data item indicating the quantity of audio data recorded in this block.

31. (Previously Presented) The process as claimed in claim 28, wherein the recorded audio and video data are elementary stream packets, with the exclusion of information emanating from the transport layer.

32. (Previously Presented) An audio and video data recording device, comprising:

a double file system wherein a first system is adapted to files of an audio/video stream type and wherein a second file system is adapted to files of smaller size than the audio/video streams.

33. (Previously Presented) The device as claimed in claim 32, further comprising a rerecordable disk divided into sectors, data blocks of the first file system having a size of at least 256 sectors, data blocks of the second file system having a size of a few sectors.

APPENDIX II - EVIDENCE

Applicant does not rely on any additional evidence other than the arguments submitted hereinabove.

APPENDIX III - RELATED PROCEEDINGS

Applicant respectfully submits that there are no proceedings related to this appeal in which any decisions were rendered.

APPENDIX IV - TABLE OF CASES

1. *In re Howard*, 394 F. 2d 869, 157 USPQ 615, 616 (CCPA 1968)
2. 29 AM. Jur 2D Evidence S. 33 (1994)
3. *In re Ahlert*, 424 F. 2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970)
4. *In re Eynde*, 480 F. 2d 1364, 1370; 178 USPQ 470, 474 (CCPA 1973)
5. *In re Fine*, 5 USPQ 2d 1600, (Fed Cir. 1988)
6. ACS Hospital Systems Inc v. Montefiore Hospital, 221 USPQ 929,933
(Fed. Cir. 1984)
7. *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (CCPA 1966)
8. *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438
(Fed.Cir. 1988),_cert. denied, 488 U.S. 825 (1988)
9. *Ashland Oil Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 28, 293, 227 USPQ
657, 664 (Fed.Cir. 1985), cert. denied, 475 U.S. 1017 (1986)
10. *In re Oetiker*, 977 F2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)
11. *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)

APPENDIX V - LIST OF REFERENCES

<u>U.S. Pat. No.</u>	<u>Issued Date</u>	<u>102(e) Date</u>	<u>Inventors</u>
6,067,282	May 23, 2000		Moriyama

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